

**METRO VANCOUVER REGIONAL DISTRICT
FLOOD RESILIENCY TASK FORCE**

REGULAR MEETING

Wednesday, February 23, 2022

1:00 p.m.

**Meeting conducted electronically pursuant to the Procedure Bylaw
28th Floor Boardroom, 4515 Central Boulevard, Burnaby, British Columbia
Webstream available at <http://www.metrovanancouver.org>**

A G E N D A¹

OPENING REMARKS

Director Sav Dhaliwal, Board Chair

1. ADOPTION OF THE AGENDA

1.1 February 23, 2022 Regular Meeting Agenda

That the Flood Resiliency Task Force adopt the agenda for its regular meeting scheduled for February 23, 2022 as circulated.

2. ADOPTION OF THE MINUTES

3. DELEGATIONS

4. INVITED PRESENTATIONS

4.1 Steve Litke, Fraser Basin Council

Subject: Lower Mainland Flood Management Strategy Overview

5. REPORTS FROM COMMITTEE OR STAFF

5.1 2022 Flood Resiliency Task Force Meeting Schedule and Work Plan

pg. 3

That the Flood Resiliency Task Force:

- a) receive for information the Flood Resiliency Task Force Terms of Reference and the 2022 Annual Meeting Schedule, as presented in the report dated February 14, 2022, titled "2022 Flood Resiliency Task Force Meeting Schedule and Work Plan"; and

¹ Note: Recommendation is shown under each item, where applicable.

- b) endorse the 2022 Work Plan, as presented in the report dated February 14, 2022, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”.

5.2 Member Discussion on the impacts of the November Atmospheric River Event

Verbal Update

Designated Speaker: Task Force Members

6. INFORMATION ITEMS

- 6.1** Presentation to the Mayors Committee, from Steve Litke, Fraser Basin Council, and Samantha Maki, City of Pitt Meadows, dated July 5, 2019 re *A Collaborative Regional Flood Management Strategy* pg. 9

7. OTHER BUSINESS

8. BUSINESS ARISING FROM DELEGATIONS

9. ADJOURNMENT/CONCLUSION

That the Flood Resiliency Task Force adjourn/conclude its regular meeting of February 23, 2022.

Membership:

Dingwall, Bill (C) – Pitt Meadows
Hodge, Craig (VC) – Coquitlam
Guerra, Laurie – Surrey
Harvie, George – Delta

Hillman, Mike – Burnaby
McCutcheon, Jen – Electoral Area A
Morden, Mike – Maple Ridge
Puchmayr, Chuck – New Westminster

Richter, Kim – Langley Township
Steves, Harold – Richmond
West, Brad – Port Coquitlam
Wiebe, Michael – Vancouver

To: Flood Resiliency Task Force

From: Neal Carley, General Manager, Parks & Environment

Date: February 14, 2022 Meeting Date: February 23, 2022

Subject: **2022 Flood Resiliency Task Force Meeting Schedule and Work Plan**

RECOMMENDATION

That the Flood Resiliency Task Force:

- a) receive for information the Flood Resiliency Task Force Terms of Reference and the 2022 Annual Meeting Schedule, as presented in the report dated February 14, 2022, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”; and
 - b) endorse the 2022 Work Plan, as presented in the report dated February 14, 2022, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”.
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EXECUTIVE SUMMARY

The terms of reference for the Flood Resiliency Task Force sets out the task force’s responsibilities in the areas of flood management and resiliency, which provides guidance and oversight on the implementation of the annual work plan. Work plan priorities for 2022 include the current and projected flood risks, gaps in flood preparedness and mitigation, and recommendations for the Board which are consistent with the endorsed 2022 Budget. Pursuant to the terms of reference, the meeting schedule proposes five (5) meetings, which unless otherwise determined, will be held virtually.

PURPOSE

To provide the Flood Resiliency Task Force with its Terms of Reference, the 2022 Work Plan, and the Annual Meeting Schedule.

BACKGROUND

Annually, following the Board Inaugural meeting in November, the Board Chair establishes the committee and task force structures and the terms of reference for each committee and task force, for the new year. To support the task force in its work, this report brings forward the Task Force’s Work Plan and the Schedule of Meetings for 2022.

2022 WORK PLAN

The 2022 Work Plan for the Flood Resiliency Task Force is set out in the Flood Resiliency Task Force’s Work Plan presented in this report (Attachment 1).

The work plan presented in this report is consistent with the Flood Resiliency Task Force’s Terms of Reference (Attachment 2) and with the *Board Strategic Plan* (Reference 1) and is being brought forward for the Task Force’s information, review, and endorsement.

The Task Force will consider the flood resilience of the region as a whole and the needs of Metro Vancouver Regional District members, while recognizing the interconnectedness of flood resiliency.

Key actions in the 2022 Work Plan for the Task Force are described below and listed according to the Task Force's responsibilities in its Terms of Reference:

- Reviewing the *Lower Mainland Flood Management Strategy* (Reference 2);
- Reviewing the impacts on the region and Metro Vancouver Regional District members by the severe flooding in November and December of 2021;
- Identifying risks and gaps in the existing infrastructure to mitigate flooding;
- Identifying short term capital investment to repair damage to the infrastructure from recent floods;
- Identifying longer term capital investment to bring infrastructure to withstand predicted flooding due to climate change;
- Considering Metro Vancouver regional priorities and issues for the *Lower Mainland Flood Management Strategy*;
- Identifying roles and responsibilities of all orders of government to financing, developing and maintaining the infrastructure;
- Considering options to coordinate and collaborate with:
 - a) Metro Vancouver Regional District members;
 - b) Fraser Valley Regional District;
 - c) First Nations;
 - d) Provincial government; and
 - e) Federal government; and
- Reporting back to the Metro Vancouver Board with advice and recommendations on flood resiliency and related matters.

The Task Force will be updated on the status of the actions and projects in this Work Plan on a regular basis per the Task Force's schedule.

2022 TASK FORCE MEETING SCHEDULE

The *MVRD Procedure Bylaw* requires the Corporate Officer to provide the Task Force with an Annual Meeting Schedule for the upcoming year, including the date, time and place of the meetings.

Below are the confirmed 2022 meeting dates for the Flood Resiliency Task Force to be held in the Metro Vancouver Boardroom, 28th Floor, 4515 Central Blvd, Burnaby BC:

- Wed, Feb 23 @ 1:00 pm
- Wed, Apr 20 @ 1:00 pm
- Wed, Jun 22 @ 1:00 pm
- Wed, Sep 28 @ 1:00 pm
- Wed, Oct 26 @ 1:00 pm

Meeting Place – Electronic and In-Person Meetings

The *MVRD Procedure Bylaw* authorizes a flexible model for meeting attendance. Most meetings will be electronic meetings: essentially hybrid meetings at which a member may attend in-person or by electronic facilities at their discretion (e.g. Zoom); however, certain meetings throughout the year may be deemed to require in-person attendance when: 1) carried by resolution of the committee; or

2) the Chair determines in-person attendance as a requirement, subject to committee members being provided with seven (7) days of advance notice of the requirement to attend in person. The Task Force may wish to consider if in-person attendance would benefit any of the meeting dates on the schedule.

ALTERNATIVES

1. That the Flood Resiliency Task Force:
 - a) receive for information the Flood Resiliency Task Force Terms of Reference and the 2022 Annual Meeting Schedule, as presented in the report dated February 14, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”; and
 - b) endorse the 2022 Work Plan, as presented in the report dated February 14, 2022, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”.
2. That the Flood Resiliency Task Force:
 - a) receive for information the Flood Resiliency Task Force Terms of Reference and the 2022 Annual Meeting Schedule, as presented in the report dated February 14, 2022, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”; and
 - b) endorse the 2022 Work Plan, as presented in the report dated February 14, 2022, titled “2022 Flood Resiliency Task Force Meeting Schedule and Work Plan”, incorporating the requested changes from the Flood Resiliency Task Force.

FINANCIAL IMPLICATIONS

The priorities in the 2022 Work Plan of the Flood Resiliency Task Force are consistent with the 2022 Budget approved by the MVRD Board on October 29, 2021.

Task Force meeting expenses and remuneration associated with meeting attendance have been allocated in the annual budget.

CONCLUSION

The work plan presented in this report identifies the priorities for the Flood Resiliency Task Force in 2022 and is consistent with its terms of reference and the 2022 Budget approved by the MVRD Board. To assist the Task Force, the 2022 Annual Meeting Schedule has been established to guide the Task Force’s success in completing the business of the work plan. Staff recommends that Alternative 1 be approved.

Attachments

1. “Flood Resiliency Task Force 2022 Work Plan”, dated February 16, 2022
2. “Flood Resiliency Task Force Terms of Reference”, dated February 16, 2022

Reference

1. [Board Strategic Plan 2019 - 2022: May 2021 Update](#)
2. [Fraser Basin Council - Lower Mainland Flood Management Strategy](#)

Flood Resiliency Task Force 2022 Work Plan

Report Date: February 14, 2022

Priorities

1 st Quarter	Status
Review the <i>Lower Mainland Flood Management Strategy</i>	Pending
Review impacts on the region and Metro Vancouver Regional District members by the severe flooding in November and December of 2021	Pending
2 nd Quarter	
Identify risks and gaps in the existing infrastructure to mitigate flooding	Pending
Identify estimated short term capital investment to repair damage to the infrastructure from recent floods	Pending
Identify outreach and feedback opportunities with MVRD members, Fraser Valley Regional District, First Nations, provincial government, and Federal government	Pending
Identify estimated longer term capital investment to bring infrastructure to withstand predicted flooding due to climate change	Pending
3 rd Quarter	
Task Force Tour of Flood Resiliency Works	Pending
Consider Metro Vancouver regional priorities and issues for the Lower Mainland Flood Management Strategy	Pending
4 th Quarter	
Identify roles and responsibilities of all orders of government to financing, developing, and maintaining the infrastructure	Pending

Flood Resiliency Task Force

Terms of Reference

The Flood Resiliency Task Force is the standing committee of the Metro Vancouver Board responsible for providing advice and recommendations to the Metro Vancouver Board on flood resiliency and related matters.

Task Force Responsibilities

The Task Force will provide advice and recommendations to the Metro Vancouver Board and to the Board members appointed to the Leadership Committee of the Lower Mainland Flood Management Strategy on issues related to flood resiliency. Key responsibilities for the Task Force include:

- Reviewing the Lower Mainland Flood Management Strategy;
- Reviewing the impacts on the region and Metro Vancouver Regional District members by the severe flooding in November and December of 2021;
- Identifying risks and gaps in the existing infrastructure to mitigate flooding;
- Identifying short term capital investment to repair damage to the infrastructure from recent floods;
- Identifying longer term capital investment to bring infrastructure to withstand predicted flooding due to climate change;
- Considering Metro Vancouver regional priorities and issues for the Lower Mainland Flood Management Strategy;
- Identifying roles and responsibilities of all orders of government to financing, developing and maintaining the infrastructure;
- Considering options to coordinate and collaborate with:
 - a) Metro Vancouver Regional District members;
 - b) Fraser Valley Regional District;
 - c) First Nations;
 - d) Provincial government; and
 - e) Federal government; and
- Reporting back to the Metro Vancouver Board with advice and recommendations on flood resiliency and related matters.

Task Force Membership and Meetings

The Chair of the Metro Vancouver Board shall appoint the Chair and Vice Chair of the Task Force. Task Force members are appointed annually by the Metro Vancouver Board Chair. The Task Force will meet every two months, and holds special meetings as required. A quorum of 50% plus one of the Task Force membership is required to conduct Task Force business.

Task Force Management

The Task Force Chair, or in the absence of the Chair the Vice Chair, is the chief spokesperson on matters of public interest within the Task Force's purview. For high profile issues the role of spokesperson rests with the Metro Vancouver Board Chair or Vice Chair. On technical matters or in

cases where an initiative is still at the staff proposal level, the Chief Administrative Officer or designate is the appropriate spokesperson. Where necessary and practical, the Board Chair and Chief Administrative Officer will confer to determine the most appropriate representative to speak.

The Chief Administrative Officer assigns a Committee Manager for the Task Force. The Committee Manager is responsible for coordinating agendas and is the principal point of contact for Task Force members.

The Task Force may request the Committee Manager to:

- gather information and provide analysis of the Lower Mainland Flood Management Strategy, flood resiliency matters, or legislated responsibilities of the different levels of government;
- seek out and consider input from additional stakeholders deemed to have an interest in the flood resiliency; and
- seek advice and input from other Metro Vancouver Standing Committees and other committees, such as the Regional Administrators Advisory Committee, Regional Engineers Advisory Committee or Regional Planning Advisory Committee.



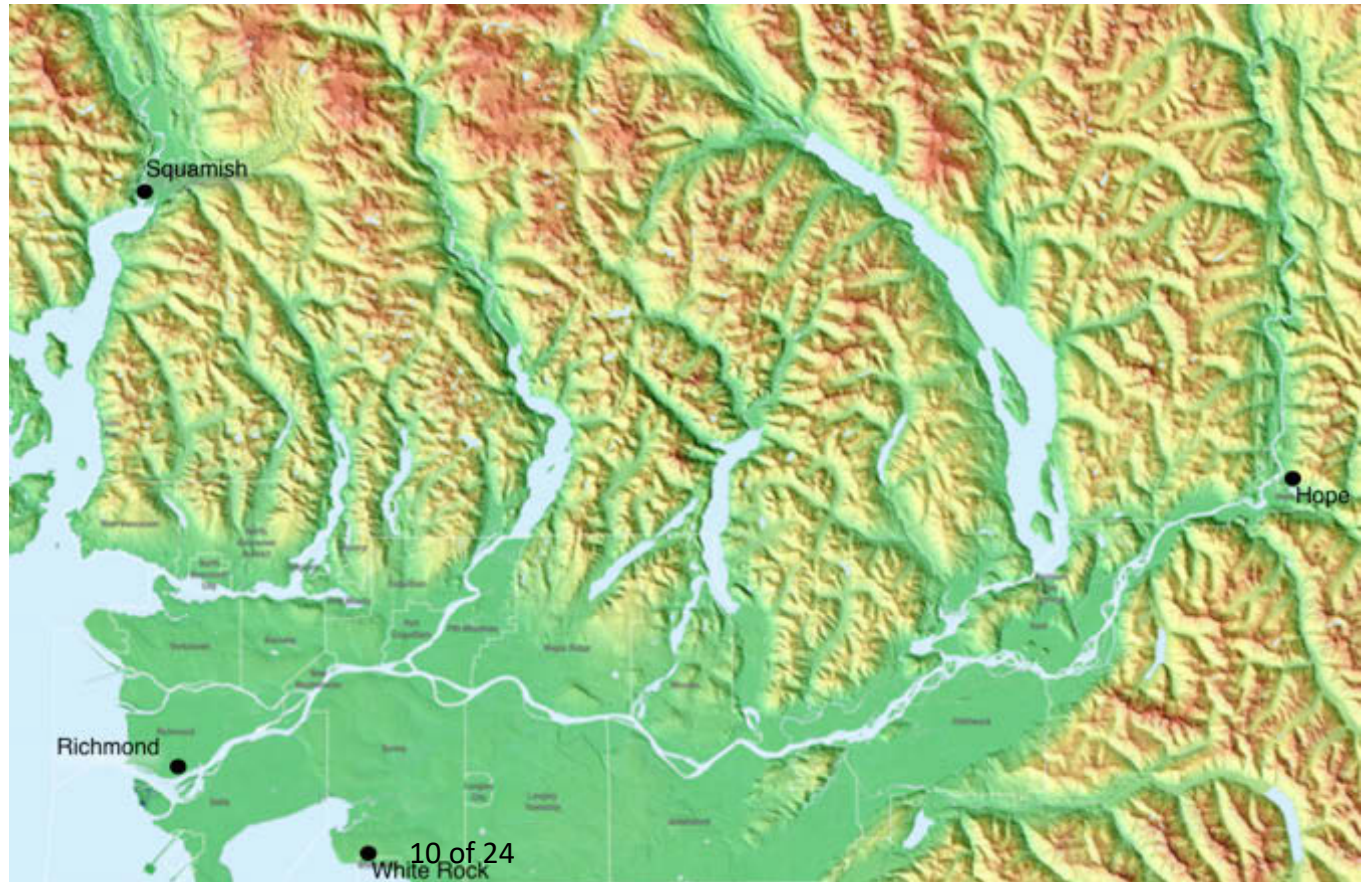
Fraser Basin Council

A Collaborative Regional Flood Management Strategy

Steve Litke, Fraser Basin Council and Samantha Maki, City of Pitt Meadows
Metro Vancouver Mayors' Committee | July 5, 2019

Lower Mainland Flood Management Strategy

Aims to reduce flood risk and increase resilience for communities along the Lower Fraser River and South Coast



Why a Regional, Collaborative Approach?

- Information sharing and peer learning
- Recognition of regional interdependencies
- Strengthened communications and consensus building
- Undertake projects of regional benefit
- Cost-sharing
- **Regional consensus = compelling case for action**



Partners and Participants

Government of Canada

- Indigenous Services Canada
- Natural Resources Canada

Province of BC

- Min. of Public Safety & Solicitor General (Emergency Management BC)
- Min. of Forests, Lands, Natural Resource Operations and Rural Development
- Min. of Transportation and Infrastructure
- Min. of Environment and Climate Change Strategy

Local Governments

- ~26 municipalities and 2 regional districts from Hope to Ocean

First Nations

- Ongoing efforts to engage ~30 First Nations from Hope to Ocean

Other Regional Interests

- Port of Vancouver
- Vancouver International Airport Authority
- Greater Vancouver Gateway Council
- Insurance Bureau of Canada
- And more



Phase 1 of the Strategy (2014-2016)

Building a better understanding of:

- Flood hazards (larger and more frequent floods are projected both on the coast and the Fraser River)
- Flood vulnerabilities (\$10s of Billions in potential losses)
- Flood protection infrastructure, policies and practices (most Lower Mainland dikes don't meet current prov'l standards)



Regional Assessment of Flood Vulnerabilities

Total Economic Loss Projections



Flood Scenario	Residential	Commercial	Industrial	Interrupted Cargo Shipments	Infrastructure	Agriculture	Total
A Coastal (Present Day)	\$5.6 B	\$6.3 B	\$1.6 B	\$3.6 B	\$1.4 B	\$100 M	\$19.3 B
B Coastal (Year 2100)	\$7.1 B	\$8.6 B	\$2.6 B	\$3.6 B	\$1.8 B	\$200 M	\$24.7 B
C River (Present Day)	\$2.6 B	\$3.8 B	\$1.6 B	\$7.7 B	\$4.6 B	\$1.6 B	\$22.9 B
D River (Year 2100)	\$6.6 B	\$7.6 B	\$2.9 B	\$7.7 B	\$5.0 B	\$1.6 B	\$32.7 B

Lower Mainland Dike Assessment

**Dike integrity depends on many factors.
The assessment covered:**

- Dike crest height
- Geometry
- Geotechnical stability during floods & earthquakes
- Erosion protection
- Control of vegetation/animal encroachments
- Appurtenant structures on dikes
- Administrative arrangement including secured rights of way and inspection practices

Lower Mainland Dike Assessment

- Majority of assessed dikes in Lower Mainland (69%) were scored as Poor to Fair
- 18% Unacceptable to Poor
- 13% Fair to Good
- Most were reconstructed in 1970s and 1980s
- High vulnerability to overtopping and seismic damage
- Standards have been updated through more accurate flood modeling and seismic design



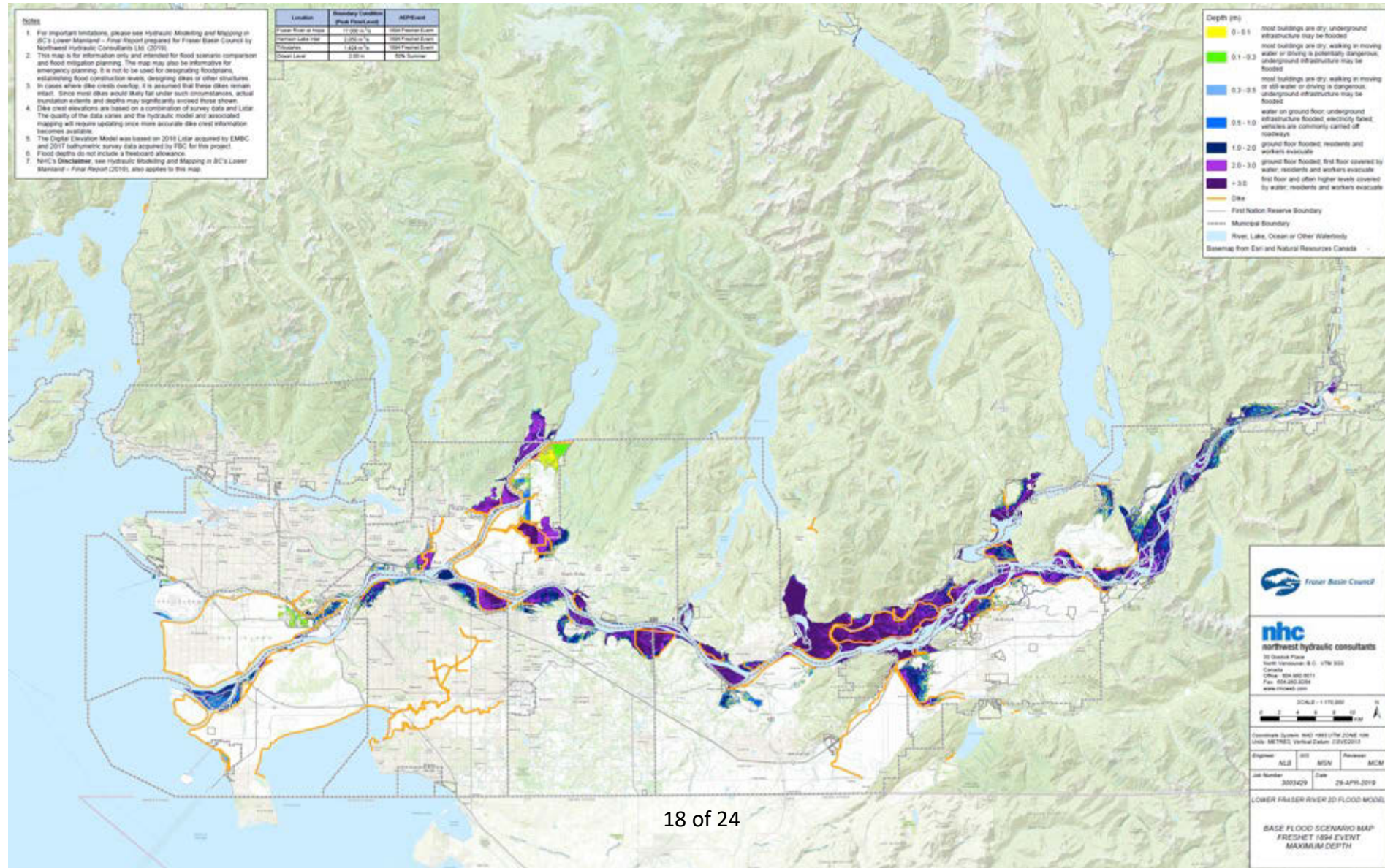
Phase 2 of the Strategy (2016-2020)

Developing the Strategy:

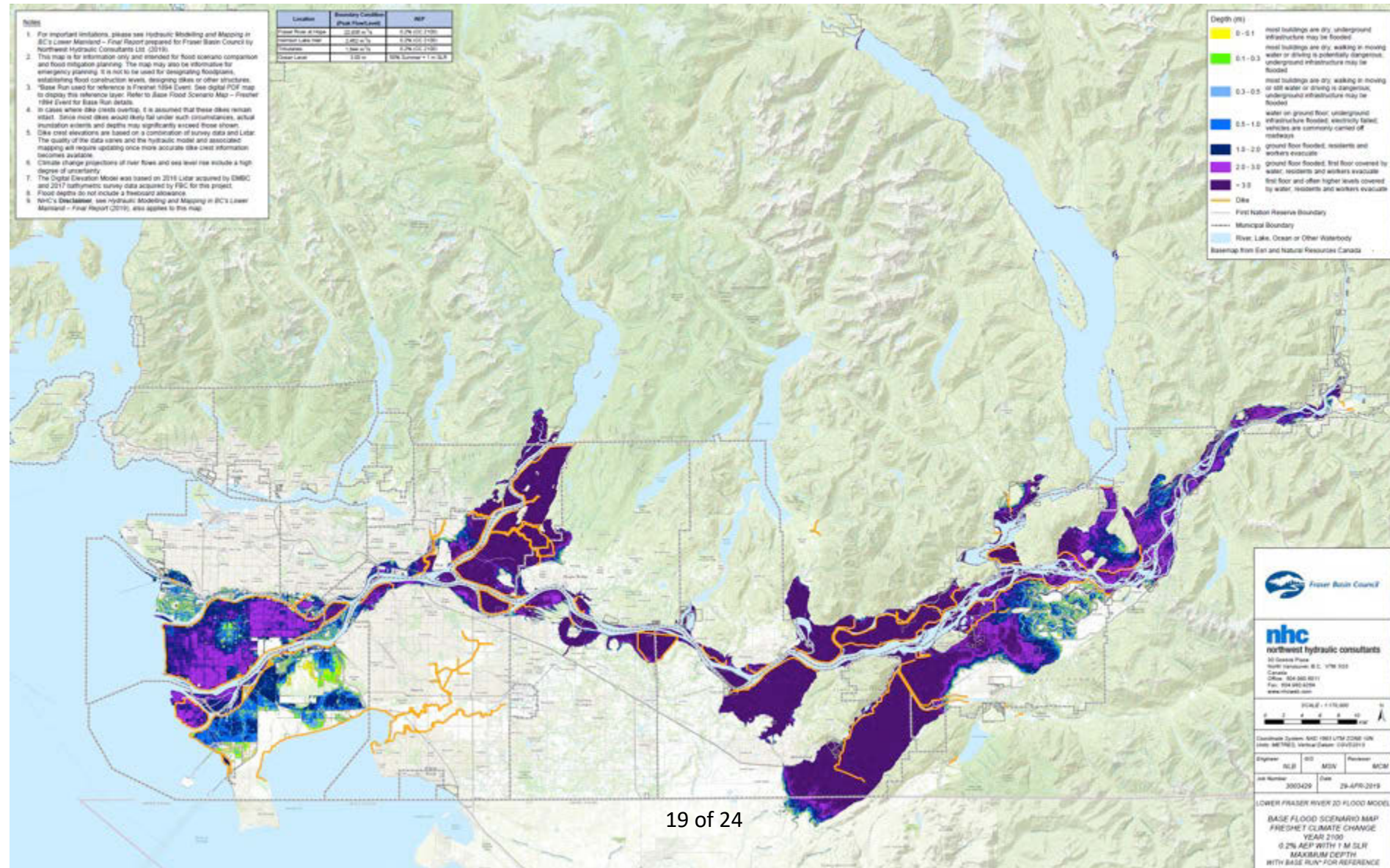
- Recommended priorities for flood risk reduction
- Recommended management options for diverse local circumstances
- Recommendations for secure, sustainable funding



Recurrence of 1894 Flood (>500-yr)



500-yr, year 2100 with 1 m SLR



Funding and Financial Arrangements

- Strong business case for proactive / preventative approaches
- Major repairs and upgrades are beyond the ability to pay for most local authorities
- Access current funding programs for near-term action
- Establish a new dedicated funding program for longer-term implementation of the Flood Strategy
- Cost-shared approach
- Regional approach



Governance

- Early support from four orders of government and the transportation sector on the Leadership Committee to further explore establishment of a new, regional-scale governance body to oversee implementation of the Flood Strategy
- Will explore variations on scope of mandate and composition for presentation, discussion and further refinement at and following the Flood Forum
- Flood Forum – October 8-9 in Vancouver

City of Pitt Meadows

- Dike Infrastructure does not meet current standards (height, seismic, structure)
- 86% of land falls within the floodplain
- Risk Assessment – 2018
Flood Mitigation Plan – 2020
- \$725M+ in economic losses if flood conditions of 1894 occurred
- \$100M+ to upgrade
- Reliance of dike infrastructure interconnected to neighboring municipalities

Proposed Recommendation

That the MVRD Board:

- a) Endorse a collaborative approach for the Fraser Basin Council's Lower Mainland Flood Management Strategy between all levels of government in the lower mainland and request that the Fraser Basin Council share the Flood Management Strategy with the Integrated Partnership for Regional Emergency Management (IPREM); and,
- b) Refer the strategy to Metro Vancouver staff to review Metro Vancouver's potential role under the Lower Mainland Flood Management Strategy.

An aerial photograph of a wide river valley. In the foreground, there are agricultural fields and some residential areas. The river flows through the center, with a large island on the left. In the background, there are rolling hills and mountains under a cloudy sky.

Thank You!

For more information:
www.floodstrategy.ca

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